AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings of claims in the application:

1. (Cancelled).

2. (Currently Amended). The pattern generator of claim ~~1~~ 14 wherein the array of figures comprises an array of spots.

3. (Cancelled).

4. (Cancelled).

5. (Cancelled).

6. (Currently Amended). The pattern generator of claim ~~1~~ 14 wherein the rotating optical element is capable of rotating at a speed of at least 5,000 rpm.

7. (Currently Amended). The pattern generator of claim ~~1~~ 14 wherein the figures in the array of figures are offset by uneven amounts.

8. (Currently Amended). The pattern generator of claim ~~1~~ 14 wherein the figures are generated in a non-sequential order.

9. (Currently Amended). The pattern generator of claim ~~1~~ 14 wherein a majority of facets include a said offset component.

10. (Currently Amended). The pattern generator of claim ~~10~~ 14 wherein each offset component comprises a lens-like optical element, and optical powers of the lens-like optical elements vary from facet to facet whereby different facets introduce different offsets.

11. (Currently Amended). The pattern generator of claim ~~1~~ 14 wherein the offset components are centered on the rotational axis of the first optical element.

12. (Currently Amended). The pattern generator of claim ~~1~~ 14 wherein the offset components are rotationally symmetric.

13. (Currently Amended). The pattern generator of claim ~~1~~ 14 wherein each offset component comprises a lens-like optical element.

14. (Currently Amended). An optical pattern generator for generating an array of figures that are offset along an offset direction, the pattern generator comprising:

a first multi-faceted rotating optical element having a rotational axis and a plurality of facets that rotate around the rotational axis, wherein

each facet causes an incident optical beam to generate a figure from the array of figures as the facet rotates through the optical beam; and

one or more facets include an offset component that is substantially rotationally symmetric and substantially centered on the rotational axis of the first optical element and that offsets the figure along the offset direction, wherein the offset direction is generally aligned with a radial direction of the optical element; and

~~The pattern generator of claim 1 further comprising~~ a second multi-faceted rotating optical element having a rotational axis and a plurality of facets that rotate around the rotational axis, the second optical element located downstream of the first optical element, wherein[[:]]

each facet on the first optical element has a corresponding facet on the second optical element, the first and second optical elements are counter-rotating, and corresponding facets rotate through the optical beam in synchronization and cause the optical beam to generate a figure from the

array of figures as the corresponding facets rotate through the optical beam; and

for at least one facet on the first optical element that includes a said offset component, the corresponding facet on the second optical element includes an offset component that is substantially rotationally symmetric and substantially centered on the rotational axis of the second optical element and that offsets the figure along the offset direction.

15. (Original). The pattern generator of claim 14 wherein the offset components on corresponding facets have optical powers that are opposite in sign.

16. (Original). The pattern generator of claim 15 wherein, for at least one pair of corresponding facets, the offset component on one facet in the pair comprises a lens-like optical element with positive optical power, and the offset component on the other facet in the pair comprises a lens-like optical element with negative optical power.

17. (Original). The pattern generator of claim 14 wherein the array of figures comprises an array of scan lines.

18. (Original). The pattern generator of claim 17 wherein the scan lines have a length of less than 1 mm.

19. (Original). The pattern generator of claim 17 wherein the scan lines compensate for a relative motion of a target, whereby the pattern generator generates an array of spots on the target.

20. (Original). The pattern generator of claim 17 wherein, for at least one pair of corresponding facets, one facet of the pair introduces a first bow in the scan line and the other facet in the pair introduces a second bow in the scan line that counteracts the first bow.

21. (Original). The pattern generator of claim 14 wherein the rotating optical elements are capable of rotating at a speed sufficient to generate 5,000 figures per second.

22. (Cancelled).

23. (Previously Presented). The pattern generator of claim 17 wherein each scan line causes a deflection of not more than 0.05 radians.

24. (Previously Presented). The pattern generator of claim 17 wherein the deflection of the optical axis by the scan lines compensates for a relative motion.

25. (Previously Presented). The pattern generator of claim 17 wherein, for at least one pair of corresponding facets, one facet of the pair introduces a first bow in the scan line and the other facet in the pair introduces a second bow in the scan line that counteracts the first bow.

26. (Previously Presented). The pattern generator of claim 17 wherein the rotating optical elements are capable of rotating at a speed sufficient to generate 5,000 scan lines per second.

27. (Previously Presented). The pattern generator of claim 17 wherein the array of scan lines consists of a single scan line and each pair of facets deflects the optical axis along the single scan line.

28. (Previously Presented). The pattern generator of claim 17 wherein the scan lines in the array are offset along a direction that is perpendicular to a scan direction.

29. (Original). The pattern generator of claim 28 wherein the scan direction is generally aligned with a tangential direction of the optical elements.

30. (Previously Presented). The pattern generator of claim 17 wherein an optical beam propagates along the optical axis, whereby the pattern generator causes the optical beam to trace the array of scan lines.

31. (Original). The pattern generator of claim 30 wherein the scan lines compensate for a relative motion of a target, whereby the pattern generator causes the optical beam to generate an array of spots that are stationary on the target during exposure of the spots.

32. (Previously Presented). The pattern generator of claim 17 wherein the optical axis comprises the optical axis of an imaging or sensing system.

33. (Original). The pattern generator of claim 32 wherein the scan lines compensate for a relative motion of an object, which image is captured by an imaging system, whereby the pattern generator deblurs the image captured by the imaging system.

34. (Previously Presented). The optical pattern generator of claim 14 wherein at least two of the corresponding facets cause unwanted optical effects that occur for each facet acting alone but that counteract each other when the facets are acting together.

35. (Original). The pattern generator of claim 34 comprising exactly two counter-rotating multi-faceted rotating optical elements.

36. (Original). The pattern generator of claim 35 wherein the two corresponding facets together generate a deflection of the optical axis and the two corresponding facets introduce unwanted optical powers that counteract each other.

37. (Original). The pattern generator of claim 35 wherein the two corresponding facets together generate a deflection of the optical axis and the two corresponding facets introduce unwanted optical powers that partially counteract each other and together introduce a net residual optical power.

38. (Original). The pattern generator of claim 35 wherein the two corresponding facets together generate a scan line of the optical axis and the two corresponding facets introduce unwanted scan line bows that counteract each other.

39. (Original). The pattern generator of claim 35 wherein the two corresponding facets together generate an optical effect along a tangential direction and the two corresponding facets introduce unwanted optical effects along a radial direction that counteract each other.

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